

## Claims

1. Nozzle arrangement for extruding doughy substances,  
5        having an inner nozzle (14), which is disposed  
coaxially with an axis of rotation (26) and has a  
mouth (16) for extruding an inner substance (56), and  
at least one outer nozzle (18, 19), which is rotatable  
about the axis of rotation (26) and has a mouth  
(20; 21) for extruding an outer substance (58, 59),  
10        characterized in that the outer nozzle (18, 19) is  
disposed axially offset relative to the inner  
nozzle (14).
2. Nozzle arrangement according to claim 1,  
15        characterized in that a plurality of outer nozzles  
(18, 19) are disposed in a mutually offset manner on  
the periphery of the inner nozzle (14).
3. Nozzle carrier having a nozzle arrangement for  
20        extruding doughy substances, comprising  
- an inner nozzle (14), which is disposed coaxially  
with an axis of rotation (26) and has a mouth (16) for  
extruding an inner substance (56), and  
- at least one outer nozzle (18, 19), which is  
25        rotatable about the axis of rotation (26) and has a  
mouth (20; 21) for extruding an outer substance  
(58, 59), wherein  
- the nozzle carrier (10) comprises a stator, in which  
an inner feed channel (22), a first (24) and a second  
30        outer feed channel (25) are formed, and  
- and comprises a rotor, which carries the nozzles  
(14, 18, 19), is rotatably supported in the stator and  
in which a first connection channel (62) is formed,

which connects the inner feed channel (22) to the -  
inner nozzle (14), and

- in the stator and/or rotor a first annular  
space (28) and in the rotor a second connection  
5 channel (63) are formed, which connect the first outer  
feed channel (24) to the first outer nozzle (18), and  
a second annular space (29) is formed, which connects  
the second outer feed channel (25) to the second outer  
nozzle (19),

10 characterized in that the outer nozzle (18, 19) is  
disposed axially offset relative to the inner  
nozzle (14).

4. Nozzle carrier according to claim 3,  
15 characterized in that the rotor is sealed off relative  
to the stator by means of a first (54), second (55)  
and third seal (56), wherein the first seal (54) seals  
off the first feed channel (22), the first (54) and  
second seal (55) seal off the first annular  
20 space (28), and the second (55) and third seal (56)  
seal off the second annular space (29).

5. Nozzle carrier according to claim 3 or 4,  
25 characterized in that the annular space (28, 29) in  
longitudinal section is in sections circular or  
elliptical in shape.

6. Nozzle carrier according to claim 3, 4 or 5,  
30 characterized in that the first annular space (28) is  
formed in the, in flow direction of the substance, top  
region by the stator and a first insert (66) of the

rotor and in the bottom region by a second insert (67) of the rotor.

7. Nozzle carrier according to one of claims 3 to 6,  
5 characterized in that the second annular space (29) is formed in the outer region by an annular insert (68) disposed in the stator and in the inner region by a/the second insert (67) of the rotor.
- 10 8. Nozzle carrier according to one of claims 3 to 7, characterized in that the first (62,) and second connection channel (63) are formed by a/the first (66) and second insert (67) of the rotor.
- 15 9. Device for extruding doughy substances, characterized in that at least one nozzle carrier according to one of claims 3 to 8 is provided and the rotor is drivable by means of a traction mechanism gearing, in particular a toothed belt drive (36, 38),  
20 or a toothed gearing (36, 72, 74) with intersecting axes (26, 70).
10. Device according to claim 9,  
25 characterized in that a plurality of nozzle carriers (10) are disposed side by side and drivable by means of a single traction mechanism gearing, in particular a toothed belt drive (36, 38), or a single toothed gearing (36, 72, 74) with intersecting axes (26, 70).
- 30 11. Device according to claim 9 or 10, characterized in that the nozzle carrier(s) (10) is (are) disposed so as to be inclined at an angle  $\alpha$  of around  $25^\circ$  to the vertical.